

CLAIMS:

1 1. A method for enabling multiple entities to send and receive messages of a
2 designated class of management services on a particular host, via a switched fabric, comprising
3 the steps of:

4 determining an incoming message for a designated class of management services
5 received from a switched fabric;

6 if the incoming message is an unsolicited incoming message, delivering the unsolicited
7 incoming message to all entities that registered as "promiscuous" clients for the designated class
8 of management services;

9 determining if all "promiscuous" clients indicate that the unsolicited incoming message
10 has not been processed; and

11 if all "promiscuous" clients indicate that the unsolicited incoming message has not been
12 processed, delivering the unsolicited incoming message to an entity that registered as a "non-
13 promiscuous" client for the designated class of management services until a "non-promiscuous"
14 client indicates that the unsolicited incoming message has been processed.

1 2. The method as claimed in claim 1, wherein the "promiscuous" clients are entities
2 registered for receiving all incoming messages that correspond to the designated class of
3 management services, and the "non-promiscuous" client is an entity registered for receiving only
4 messages that are specifically targeted for said entity.

1 3. The method as claimed in claim 2, wherein the designated class of management
2 services indicates a Management Datagram (MAD) class assigned to a specific management
3 service in accordance with the "*InfiniBandTM Architecture Specification*".

1 4. The method as claimed in claim 3, wherein the specific management service
2 indicates one of a subnet administration service which provides data path information to reach
3 fabric-attached devices; a communication management service which provides the means to set
4 up and manage communications between queue pairs; a performance management service which
5 specifies a set of facilities for examining various performance characteristics of the switched
6 fabric; a device management service which specifies the means for determining the type and
7 location of various types of fabric-attached devices; a device configuration service which assigns
8 fabric-attached devices to the particular host; a baseboard management service which allows
9 management of the fabric-attached devices; and a network protocol service which specifies
10 mechanisms to support transport of Simple Network Management Protocol "SNMP" operations
11 through the switched fabric.

1 5. The method as claimed in claim 3, wherein, when the incoming message is
2 determined as a response message to previously sent messages from the particular host, a
3 ClientID is extracted from a message header and the response message is delivered to an entity
4 identified by the *ClientID*, if the entity is registered for the designated class of management

1 services.

1 6. The method as claimed in claim 5, wherein the incoming message is determined
2 as an unsolicited incoming message when the incoming message does not contain a "response"
3 bit set in a message header, or a response message when the incoming message contains a
4 "response" bit set in the message header.

1 7. The method as claimed in claim 3, wherein all entities are required to register for
2 the designated class of management services to obtain respective valid *ClientID* prior to enabling
3 multiple entities to send and receive messages of the designated class of management services on
4 the particular host.

1 8. A host system comprising:
2 at least one channel adapter (CA) including one or more ports to support data transfers,
3 via a switched fabric; and
4 an access driver module including a general service agent (GSA) to enable multiple
5 entities to send and receive messages of a designated class of management services on the host
6 system, via the switched fabric.

1 9. The host system as claimed in claim 8, wherein the general service agent (GSA)
2 is configured to perform:

1 determining an incoming message for a designated class of management services
2 received from the switched fabric;
3 if the incoming message is an unsolicited incoming message, delivering the unsolicited
4 incoming message to all entities that registered at the general service agent (GSA) as
5 "promiscuous" clients for the designated class of management services;
6 determining if all "promiscuous" clients indicate that the unsolicited incoming message
7 has not been processed; and

8 if all "promiscuous" clients indicate that the unsolicited incoming message has not been
9 processed, delivering the unsolicited incoming message to an entity that registered at the general
10 service agent (GSA) as a "non-promiscuous" client for the designated class of management
11 services until a "non-promiscuous" client indicates that the unsolicited incoming message has
12 been processed.

1 10. The host system as claimed in claim 9, wherein the "promiscuous" clients are
2 entities registered at the general service agent (GSA) for receiving all incoming messages that
3 correspond to the designated class of management services, and the "non-promiscuous" client is
4 an entity registered at the general service agent (GSA) for receiving only messages that are
5 specifically targeted for said entity.

1 11. The host system as claimed in claim 10, wherein the designated class of
2 management services indicates a Management Datagram (MAD) class assigned to a specific

1 management service in accordance with the "*InfiniBandTM Architecture Specification*".

12. The host system as claimed in claim 11, wherein the specific management service
1 indicates one of a subnet administration service which provides data path information to reach
2 fabric-attached devices; a communication management service which provides the means to set
3 up and manage communications between queue pairs; a performance management service which
4 specifies a set of facilities for examining various performance characteristics of the switched
5 fabric; a device management service which specifies the means for determining the type and
6 location of various types of fabric-attached devices; a device configuration service which assigns
7 fabric-attached devices to the host system; a baseboard management service which allows
8 management of the fabric-attached devices; and a network protocol service which specifies
9 mechanisms to support transport of Simple Network Management Protocol "SNMP" operations
10 through the switched fabric.

13. The host system as claimed in claim 11, wherein, when the incoming message is
1 determined as a response message to previously sent messages from the host system, the general
2 service agent (GSA) extracts a ClientID from a message header and delivers the response
3 message to an entity identified by the *ClientID*, if the entity is registered at the general service
4 agent (GSA) for the designated class of management services.

14. The host system as claimed in claim 13, wherein the general service agent (GSA)

1 determines the incoming message as an unsolicited incoming message when the incoming
2 message does not contain a "response" bit set in a message header, or a response message when
3 the incoming message contains a "response" bit set in the message header.

1 15. The host system as claimed in claim 4, wherein all entities are required to register
2 with the general service agent (GSA) for the designated class of management services to obtain
3 respective valid *ClientID* prior to enabling multiple entities to send and receive messages of the
4 designated class of management services on the host system.

1 16. A computer readable medium comprising instructions that, when executed by a
2 host system in a switched fabric including end nodes and switches interconnected via links,
3 cause the host system to allow multiple entities to send and receive messages of a designated
4 class of management services on the host system by performing the steps of:

5 determining an incoming message for a designated class of management services
6 received from the switched fabric;

7 if the incoming message is an unsolicited incoming message, delivering the unsolicited
8 incoming message to all entities that registered as "promiscuous" clients for the designated class
9 of management services;

10 determining if all "promiscuous" clients indicate that the unsolicited incoming message
11 has not been processed; and

12 if all "promiscuous" clients indicate that the unsolicited incoming message has not been

1 processed, delivering the unsolicited incoming message to an entity that registered as a "non-
2 promiscuous" client for the designated class of management services until a "non-promiscuous"
3 client indicates that the unsolicited incoming message has been processed.

1 17. The computer readable medium as claimed in claim 16, wherein the
2 "promiscuous" clients are entities registered for receiving all incoming messages that correspond
3 to the designated class of management services, and the "non-promiscuous" client is an entity
4 registered for receiving only messages that are specifically targeted for said entity.

1 18. The computer readable medium as claimed in claim 17, wherein the designated
2 class of management services indicates a Management Datagram (MAD) class assigned to a
3 specific management service in accordance with the "*InfiniBand™ Architecture Specification*".

1 19. The computer readable medium as claimed in claim 17, wherein, when the
2 incoming message is determined as a response message to previously sent messages from the
3 host system, a ClientID is extracted from a message header and the response message is
4 delivered to an entity identified by the *ClientID*, if the entity is registered for the designated class
5 of management services.

1 20. The computer readable medium as claimed in claim 19, wherein the incoming
2 message is determined as an unsolicited incoming message when the incoming message does not

1 contain a "response" bit set in a message header, or a response message when the incoming
2 message contains a "response" bit set in the message header.

1 21. The computer readable medium as claimed in claim 17, wherein all entities are
2 required to register for the designated class of management services to obtain respective valid
3 *ClientID* prior to enabling multiple entities to send and receive messages of the designated class
4 of management service on the host system.